



Professional Licensing Boards

# Georgia Construction Industry Licensing Board

*Division of Conditioned Air  
Contractors*

Licensure Examinations

## *Candidate Information Bulletin*

**Examination Development and Testing Unit**

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*The Examination Development and Testing Unit gratefully acknowledges the assistance of other state licensing programs in the development of this candidate information bulletin. Portions of this bulletin were based on candidate information bulletins of other states.*

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## Introduction

The Division of Conditioned Air Contractors of the Georgia Construction Industry Licensing Board was created by the Georgia legislature to protect the public by taking steps to ensure that licensed Conditioned Air Contractors are competent in their profession. To achieve this goal, minimum standards and requirements were established by the Board for entry into the profession. Passing of a licensing examination is one of the requirements for obtaining a Conditioned Air Contractors license.

Please review this bulletin carefully. It provides you with information you need about the Conditioned Air examinations.

### 1. Getting to the Examination

An examination admission notice will be mailed two weeks prior to the examination. The notice to scheduled applicants will give the location, date, and time of the examination. We recommend that you locate the testing site and parking locations before the morning of the examination. Allow extra time on the morning of the examination to find parking and remember that most lots do charge a fee. Parking fees vary from location to location.

### 2. Veterans' Preference Points

Georgia law [General Provisions Volume 30, Title 43-1-9.(1)(2)(3)] provides that veterans meeting certain conditions are eligible for the addition of five or ten percentage points to their examination scores. To qualify, veterans must have served for a minimum of one year in active duty status, and must have served during a period of conflict or war for a minimum of 90 days. The law provides that you may also qualify for veterans' preference points if you served during a period of conflict or war and if you were discharged for injury or illness incurred in the line of duty and your disability is officially rated. To apply for veterans' preference points, if you have not already submitted a DD-214 form and documentation of your disability (if applicable), you may bring a copy of this information to the examination site and turn it in to the examination proctor. Please note that the copy will not be returned to you.

## At the Examination

### 3. What to Bring to the Examination

- A. **Admission notice** – contains time and location of examination and the classification of the examination you will be taking.
- B. **Identification** – must bear both your picture and your signature (e.g., driver's license). If you do not have such identification, you must bring a notarized photograph of yourself.
- C. **Pencils** – do not bring pens, pencils or other writing instruments to the examination. Pencils will be provided during check-in.
- D. **Calculator** – Your calculator must be a silent, non-printing, battery operated or self-powered type. It must not be programmable and should not be a device designed for the storage and retrieval of alphabetic data (such as an electronic organizer). It should not have a keypad that has all 26 letters. You may wish to bring spare batteries for your calculator.
- E. **References** – Only reference material listed on the Suggested Reference List will be allowed in the examination room.

**NOTE:** Candidates are not permitted to share references or equipment during the examination. All candidates must bring their own references and equipment. Reference material may be highlighted, or underlined. References may be tabbed/indexed with permanent tabs only; post-it flags are not acceptable. Reference books may not have hand written notes or additional loose papers. If any material is downloaded from the internet, it must be bound and placed in a binder.

#### 4. Special Accommodations for Candidates with Disabilities

The Georgia Construction Industry Licensing Board wants to ensure that all qualified individuals with a disability have the opportunity to take any of the licensing examinations.

Wheelchair access is available at all established test centers. Candidates are requested to advise the Board, in writing, at the time of application, that wheelchair access is necessary.

Qualified candidates with sensory, mental or physical disabilities that would prevent them from taking the examination under standard conditions may request special accommodations. Candidates should check the appropriate space on the "Examination Scheduling Form," and contact the Board office at the address below, to obtain the "Request for Disability Accommodation Guidelines." Application materials, including information requested in the "Guidelines," must be received by the Board by the application deadline and are available from:

Construction Industry Licensing Board  
Division of Conditioned Air Contractors  
237 Coliseum Drive  
Macon, GA 31217-3858  
(478) 207-1416

#### 5. Visitors at the Examination Site

Visitors will not be permitted in the examination room. If you need to meet family members or other persons after the examination, you should arrange to meet in the lobby of the building in which the examination is given. Candidates will not be allowed to visit with, or exchange messages with others during the examination.

#### 6. Conduct During the Examination

Under Board rule 121-3-.02(2), you are expected to conduct yourself in a professional manner during the examination. Any candidate engaging in conduct that subverts or attempts to subvert the examination process may be dismissed from the examination, may have scores withheld and/or declared invalid, may be disqualified from the practice of the profession, or may be subject to other Board sanctions under Board rule 121-5.

- A. You may bring and use only the reference material designated on the Reference List in the examination room.
- B. You may not bring cameras, cell-phones, tape recorders, pagers, timers, personal digital assistants (PDAs), or electronic recording or transmitting devices into the examination room. **If you do bring one of these devices, you will have to leave it outside the testing room, unattended, and the state will not assume responsibility for it. IF YOU ARE FOUND IN THE TESTING ROOM WITH ONE OF THESE, YOU WILL BE DISMISSED FROM THE EXAMINATION.**
- C. You may not take notes from the examination room.
- D. You may not remove from the examination room any examination materials.
- E. You are not to reproduce or reconstruct any portion of the licensing examination or aid others in reproducing or reconstructing the same.
- F. The examination proctors cannot answer any questions about the content of any examination questions.
- G. You may not leave the examination room except with the examination proctor's permission. If you are permitted to leave, you may not use the time to refer to reference material. If you are permitted to leave and return, you will not be granted any extra time to complete your examination.
- H. Report to the examination room at the designated time. Seating of candidates, distribution of test materials and testing instructions will begin shortly thereafter. **ANYONE WHO ARRIVES AFTER TESTING BEGINS WILL NOT BE ADMITTED.**
- I. You may be dismissed from the examination room and/or may be denied a license for irregularities including, but not necessarily limited to:
  - 1. disrupting other candidates;
  - 2. attempting to copy answers from another candidate;
  - 3. allowing your answers to be copied;
  - 4. impersonating another examination candidate;
  - 5. failing to follow the examination proctor's instructions;
  - 6. trying to copy or remove examination materials;
  - 7. trying to use unauthorized references or materials.

## **7. Test-taking Skills**

- A. Read all instructions carefully, and be sure you understand them. Ask questions about any instructions that are unclear.
- B. Bring a watch to the examination to use in measuring your progress through the examination. Removing your watch and placing it in view on the table may save you time since a quick time check will not require major changes in body position or eye focus.
- C. Be sure to mark an answer for all questions, even the ones about which you may be unsure. There is no penalty for guessing, and your score is based upon the total number of questions you answer correctly.
- D. For each question, select the BEST answer of the options listed. More than one choice may be partially correct, but for each question there should be only one best answer.
- E. Be sure to mark your answers on the answer sheet provided. No credit will be given for any work done in your examination booklet or answers marked in your booklet.
- F. Scratch paper will not be needed. You may perform any computations or make notes in the examination booklet.
- G. Do not make stray marks on your answer sheet. You may wish to make a note in your examination booklet next to any questions you wish to review before you turn in your examination.

## **8. Smoking Policy**

Smoking is not allowed in the examination room or connecting restrooms.

## **9. Dressing for the Examination**

Dress comfortably. Individuals have different temperature preferences and it is not possible for us to please everyone. We often have little control over the heating and air-conditioning in the locations we use for examinations. We recommend that you bring a sweater or jacket so that you can be comfortable in different conditions.

## **10. Description of the Examinations**

Two Conditioned Air Contractors licensure examinations are offered to correspond with the two classes of Conditioned Air Contractors licenses – Class I (Restricted) and Class II (Unrestricted). Both examinations consist of multiple-choice questions. Please refer to the information on the following pages for the number of questions on each examination and the content categories.

**Content Categories for Class I (Restricted) and  
Class II (Unrestricted) Conditioned Air Contractors**

**Number of questions**  
**Class I and Class II**

<b>1. Regulations, Laws, and Administrative Functions</b>	<b><u>8</u></b>
A. <i>Comply with Laws</i>	1
1. Worker's compensation	
2. Unemployment insurance	
3. Employer's tax guide (circular E)	
4. Georgia Construction Industry Licensing Board (complaint procedures, function of, renewal, etc.)	
5. State sales and use tax	
6. Business license	
7. Lien rights	
8. Americans with Disabilities Act (ADA)	
B. <i>Comply with Regulations</i>	2
1. Obtain necessary conditioned air permits and inspections	
2. Code of Federal Regulations, Title 29, Part 1926 (OSHA)	
3. Standard Mechanical Code	
4. Underwriter's Laboratory (UL) or other appropriate certification	
5. National Electrical Code (NEC)	
6. Standard Gas Code	
C. <i>Comply with Administrative Requirements</i>	5
*1. Bonding and liquidated damages	
2. Insurance: liability, property damage, auto, etc.	
3. Financing and cash flow	
4. Bookkeeping and accounting	
5. Accident or incident reports	
6. Contracts and purchase orders	
7. Inventory equipment, materials, and supplies	
8. Scheduling and project management	
<b>2. System Design</b>	<b><u>55</u></b>
1. Determine job specifications in accordance with comfort and Code requirements	
2. Determine space-load requirements (Btu gain-loss)	
a. residential	
b. commercial	
3. Determine space airflow requirements	
4. Select equipment according to design requirements	
5. Determine type, size, and location of registers	
6. Determine location for interior and exterior equipment	
7. Determine type, size, and routing of duct system (including ventilation air intake and exhaust ducts)	
8. Determine location and installation requirements for fire/smoke dampers, firestats, and smoke detectors	
9. Determine flue size, type, and clearances	
*10. Determine boiler and steam requirements	
11. Select duct construction	
12. Determine location and size of combustion air intake	

\* Class II Only

**Number of questions**  
**Class I and Class II**

13. Determine thermostat and/or humidistat location
14. Determine if available electrical service is adequate
15. Determine if structure will support type of mounting required for equipment
16. Determine layout and size of refrigerant piping
17. Determine location of condensate drain
18. Determine size and routing of fuel piping (oil, natural gas, LP gas)
19. Estimate job costs and prepare job proposal/contract
- \*20. Size steam system and chilled water piping

**3. Installation 25**

*A. Equipment 2*

1. Prepare equipment foundation/base
2. Install equipment vibration isolator
3. Install roof curb
4. Install self-contained unit: wall mount, roof mount, pad mount, thru wall
5. Install humidifier
6. Install filter/air cleaner
7. Install evaporator in existing system
8. Install electric heating coil in existing system
9. Install condensate pump
10. Install gas furnace
11. Install oil furnace
12. Install heat pumps (all types)
13. Install gas combination heating and domestic hot water system
14. Install air and water cooled system
- \*15. Install cooling tower
- \*16. Install circulating water pump

*B. Duct System 4*

1. Install and/or modify existing plenum for evaporator installation
2. Install and/or modify existing duct for duct-mounted accessories installation (air cleaner or damper)
3. Install branch duct takeoff from main using round metal duct and fittings
4. Install duct (rectangular/flexible) and fittings
5. Install manual balancing (volume) damper
6. Install register or grill
7. Install outside air intake with screen
8. Install smoke- and heat-actuated (fire) damper
9. Install powered damper with actuator
10. Install flexible connector between metal duct and equipment
11. Install duct insulation (rigid board, wrap, liner, etc.)
12. Install dryer vents
13. Install bathroom fan vents
14. Install residential and commercial range hoods and vents

*C. Flue Venting 6*

1. Install gas, oil, or all-fuel furnace vent and damper system:
  - a. PVC
  - b. Type B (double wall)



**Number of questions**  
**Class I and Class II**

- c. Type L (oil flue vent)
  - d. Type BW
  - e. single wall
- 2. Install barometric (draft regulator) damper
- 3. Install draft-induced fan
- 4. Install combustion air vents
- D. *Gas Piping and Tubing* 3
  - 1. Install gas piping according to code
    - a. copper
    - b. wrought steel
    - c. corrugated stainless steel
    - d. plastic
  - 2. Test for gas leaks
  - 3. Install gas piping supports and identification
- E. *Refrigerant Piping, Tubing, and Accessories* 3
  - 1. Install refrigerant piping according to manufacturer's recommendations and per code:
    - a. solenoid valve
    - \*b. hand valve
    - c. suction-line accumulator
    - d. filter dryer
    - e. sight glass
    - \*f. oil separator
    - g. check valve
    - h. expansion valve
    - \*i. liquid receiver
    - \*j. flexible vibration absorber
    - k. service valve
  - 2. Install refrigerant pipe insulation according to manufacturer's recommendations and per code
  - 3. Leak test system according to manufacturer's recommendation and per code
  - 4. Evacuate refrigeration circuit (new or contaminated system)
- F. *Condensate Piping, Tubing, and Accessories* 1
  - 1. Install condensate piping according to manufacturer's recommendations and per code
    - a. primary drain
    - b. secondary drain
    - c. secondary drain pan
    - d. float switches
    - e. drain and piping supports
  - 2. Install condensate pipe insulation according to manufacturer's recommendations and per code
- G. *Electrical Control Systems* 3
  - 1. Reverse rotation of 3-phase motor
  - 2. Determine circuit breaker and wiring sizes

**Number of questions**  
**Class I and Class II**

3. Install equipment control service panel
4. Install circuit breaker in service panel
5. Install electrical conduit
6. Install wiring in conduit
7. Install low-voltage cable
8. Connect electrical power to equipment
9. Connect electric duct heater
10. Connect humidifier
11. Install room thermostat or humidistat
12. Install outdoor, duct-mounted, or equipment-mounted thermostat
13. Install firestat and smoke detector
14. Connect electronic filter
15. Install electrical disconnects

**H. Place System in Operation**

**3**

1. Place system in operation according to code and manufacturer's recommendations
2. Charge and adjust refrigerant system according to manufacturer's recommendations (A/C and heat pump)
3. Check and test system operating conditions as per design criteria and manufacturer's recommendations
4. Calibrate thermostat
5. Balance duct system for correct CFM
6. Adjust fresh-air intake as per code
7. Adjust bypass and relief damper
- \*8. Set V-belt tension and align belt sheaves
9. Check motor current (amps)
10. Check motor speed and rotation
11. Adjust compressor start-delay timer
- \*12. Adjust water-flow controls
13. Check bearings for lubrication
14. Purge air from gas line and adjust gas pressure
15. Adjust burner primary air on oil and gas furnace
16. Adjust pilot flame and pilot igniter
17. Adjust direct spark igniter
18. Determine furnace efficiency through combustion analysis
19. Test for gas leaks
20. Adjust burner oil system
21. Check furnace draft
22. Test flame-proving and safety control
- \*23. Fill water-cooled condenser and cooling tower

**4. Maintain and Repair System**

**12**

**A. General**

**7**

1. Determine needed system maintenance and repairs
2. Check refrigerant charge
3. Locate leak in refrigerant circuit:

**Number of questions**  
**Class I and Class II**

- a. using electronic leak detector
- b. using nitrogen pressurization
- c. using halide leak detector
- d. using soap solution
- 4. Repair leak in refrigerant circuit
- 5. Charge air-conditioning system as per manufacturer's directions
- 6. Add oil to compressor
- 7. Check thermostat cycles
- 8. Check heat pump reversing valve operation
- 9. Install pressure switch (high, low, and oil)
- 10. Clean coils, filters, humidifier, and fan
- 11. Straighten coil fins
- 12. Replace fan bearing
- 13. Replace V-belt and sheave
- 14. Test hermetic compressor
- 15. Test compressor oil for acid and moisture
- 16. Replace compressor with or without service valves
- 17. Replace fan blade or wheel
- 18. Replace evaporator or condenser coil
- 19. Replace gas regulator
- 20. Replace gas orifice
- 21. Replace gas burner
- 22. Replace gas heat exchanger
- 23. Replace gas safety valve
- 24. Replace gas valve
- 25. Replace diaphragm-type valve
- 26. Replace millivolt-powered safety valve
- 27. Replace millivolt-powered gas valve
- 28. Replace pilot burner
- 29. Replace oil burner (chassis and air tube)
- 30. Replace burner nozzle
- 31. Replace oil-burner motor
- 32. Replace fuel oil pump
- 33. Replace fuel-cutoff valve
- 34. Replace fuel-filter cartridge
- \*35. Acid clean condenser water circuit
- \*36. Treat cooling-tower water
- \*37. Replace water-pump seal
- \*38. Replace cooling-tower water-level control valve
- 39. Clean system after burnout
- 40. Clean furnace and components
- 41. Replace ignition electrodes
- 42. Operate recover, recycle, reclaim equipment
- 43. Adjust temperature switch
- 44. Adjust defrost cycle on heat pump
- 45. Adjust refrigerant superheat
- \*46. Adjust hot-gas bypass

**Number of questions**  
**Class I and Class II**

**B. Electrical**

5

1. Determine problem in air conditioning electrical system
2. Measure voltage, amperage, and resistance in electrical circuit
3. Measure capacitance of capacitor
4. Make electrical connection: crimp, screw terminal, solderless splice, solder
5. Analyze electronic circuit containing power source, control card, sensor, and control device
6. Connect motor and/or start capacitor
7. Replace transformer
8. Install/replace hard-start kit on hermetic compressor
9. Replace magnetic coil in motor starter
10. Install/replace motor contactor and/or relay
11. Replace heat-pump defrost timer and/or defrost thermostat
12. Connect pressure switch
13. Install/replace anti-short cycle timer
14. Replace control switch (fan, temperature-limit, or fan and limit combination)
15. Connect gas valve
16. Replace pilot safety switch
17. Replace glow-coil assembly
18. Replace door switch (panel switch)
19. Replace thermocouple or thermopile
20. Replace flame-sensing electronic sensing device
21. Install/replace spark-ignition pilot lighter, direct-spark igniter system, or hot surface ignition
22. Troubleshoot electronic ignition control system
23. Replace and/or install starting or run capacitor
24. Replace motor overload protector and/or electric-heater element
25. Replace electronic air cleaner ionizing wire
26. Replace solid-state control board
27. Replace solenoid coil
28. Install/replace crankcase heater
29. Install/replace oil-line heat tape
30. Replace electric-heater sequencer
31. Attempt to start stuck hermetic compressor
32. Replace fan motor
33. Replace defrost heater

<b>Total Number of Test Questions</b>	<b>100</b>
<b>Additional Pre-Test Questions Per Examination</b>	<b><u>20</u></b>
<b>Total Number of Test and Pre-Test Questions</b>	<b>120</b>

\* Class II Only

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## 11. Time Limits

You will have a total of seven (7) hours to complete both parts of the Conditioned Air Contractors (Class I and Class II) licensure examinations. The examination is administered in two parts. You will have three and a half (3.5) hours to complete Part I, followed by a break. You will also have three and a half (3.5) hours to complete Part 2. This limit includes time for the 20 pre-test questions.

## 12. Pre-testing

The total number of questions on the examinations will include pre-testing of new test questions. The number of questions used to compute your score is shown on page 9 (total number of test questions). The pre-test questions will not be used to compute your score, but will allow for the collection of statistical information on the questions. Pre-test questions will be either rewritten or included on future examinations based on the statistical information collected.

## 13. Question Comments

There will be space provided on the back of the answer sheet (a sample is provided at the end of this bulletin) for you to comment on the examination's content or on any of the individual questions. When commenting on a question, please be as specific as possible and provide supporting arguments. If you believe that a question is unclear, explain why this is so. Your comments will be used in determining which questions on the examination will be reviewed prior to grading.

# After the Examination

## 14. Statistical Review of Examination Performance

After administration of the Conditioned Air Contractors examinations, a statistical analysis of the examination and of each question is conducted. Based on the statistics and the candidates' comments, questions that might be flawed will be reviewed by the Division. After review of the questions on the examinations, the examinations are scored.

## 15. Difficulty Rating

The examination is developed in a manner to ensure consistency in evaluating the candidates' competency in the profession. Individual questions used on the examination are developed using a panel of licensed contractors. As each question is approved, it is assigned a difficulty rating by the panel. The difficulty rating of each question is used to determine the passing point of the examination form. In this manner, passing an examination form with more difficult questions will require a smaller number of correct answers, while passing an examination form with less difficult questions will require a larger number of correct answers. This process of determining the passing score is referred to as the modified Angoff method.

A new examination form is created for each examination administration. When a new examination is created, it is not possible to select questions with exactly the same difficulty level as all previous examinations. Accordingly, requiring candidates to answer correctly the same number of questions in order to pass different examination forms would be unfair.

Therefore, the number of answers required to pass any given examination form will vary from one form to another, based on the difficulty of the questions. If the questions selected for one examination form are more difficult, fewer questions are required to be answered correctly to pass that examination form. For example, a candidate may be required to answer 68% of the questions correctly to pass a more difficult examination form. To pass a less difficult examination form, correct answers for 72% of the questions may be required.

## 16. Final Scaled Scores

To record and report scores for examination forms with different passing points in a consistent manner, the minimum passing score for each examination form is converted to a final scaled score of 70. In this manner, the minimum passing score is 70 for all examination forms, regardless of the difficulty level of the individual examination form.

In the example above, candidates who correctly answer 68% of the questions on the more difficult examination would receive a final scaled score of 70. Candidates who answer more questions correctly would receive a final scaled score proportionately higher than 70. Candidates who answer fewer questions correctly would receive a final scaled score proportionately lower than 70.

The final scaled score of 70 is required for passing any examination form. By scaling the scores based on a common passing score of 70, a candidate's performance from one examination form to another is directly comparable, the relative performance of examination forms administered from one time period to another can be evaluated, and the processing of candidate scores is fairer because the difficulty level of the individual examination forms has been controlled.

## 17. Score Reports

Approximately six (6) weeks after the examination, score reports will be mailed. Examination scores cannot be released over the telephone, so please do not call the Board Office for this purpose. Passing candidates will receive their examination score, while failing candidates will receive their examination score and subscores in the major examination content areas. Subscores will be provided for the examination major content areas listed in this bulletin (see page 4).

## 18. Examination Regrade Process

Your scores are checked many times to ensure the accuracy of your test results. The optical scanner used in scoring your test is extremely accurate, and scores close to 70 are routinely handscored. Experience has shown that it is extremely unlikely that any scoring errors will occur.

However, you may request a handscoring of your answer sheet. In the unlikely event that your score changes, the new score from the handscoring will replace your previous score, whether the score increases or decreases. You must send your request in writing, within thirty (30) days of the postmark of your examination results notice to the address given below. Please indicate the date on which you took the examination and the title of the examination you wish to be handscored. You will receive notification of the handscoring results within thirty (30) days of receipt of the request. Results of the handscoring will be final. Requests for handscoring should be sent to:

**Applied Measurement Professionals, Inc.**  
8310 Nieman Road  
Lenexa, KS 66214-1579

## 19. Licenses

The Board Office will mail passing candidates their licenses approximately six (6) weeks after the examination date. Any questions regarding licensing should be directed to the Board Office at 237 Coliseum Drive, Macon, GA 31217-3858, (478) 207-1416.

## 20. Re-examination Procedure

Candidates failing the examination must retake the examination in order to become licensed. A new scheduling form will be sent with the score report to failing candidates. Board rule 121-2-.05 states that "Any applicant for licensure who takes and fails the examination twice after July 1, 1989, must present satisfactory evidence to the appropriate division of the Board that the applicant has completed a Board approved review course before such applicant will be admitted to a third examination. If such applicant fails the examination a third time, the applicant shall not be required to complete additional courses prior to taking subsequent examinations." Questions about examination scheduling may be directed to Applied Measurement Professionals, Inc., Candidate Services Department at 1-800-345-6559. A current scheduling form may be obtained from the Board Office or from the Board's website at [www.sos.state.ga.us](http://www.sos.state.ga.us).

## 21. Sample Questions

The following questions are intended to help you become familiar with some of the types of questions you may encounter on the examinations. These sample questions do not represent the full range of content or difficulty levels contained in the actual examinations.

1. According to the Standard Mechanical Code, which of the following is the reference for residential summer and winter load calculation?
  - \*A. ACCA Manual J
  - B. ACCA Manual N
  - C. Trane Air Conditioning Manual
  - D. Carrier System Design Manual Part III
  
2. Any product kept in inventory that is tagged or labeled with any keywords such as "danger," "caution," "flammable," or "warning," requires which of the following?
  - A. locked storage area
  - B. secured storage area
  - C. separate storage area
  - \*D. Material Safety Data Sheet
  
3. All of the following considerations are necessary when installing an electric heater in a duct system EXCEPT
  - A. duct size.
  - B. airflow.
  - C. excessive turbulence.
  - \*D. size of heat-pump.

\* **Correct Answer**

## 22. Sample Answer Sheet

A sample answer sheet is included at the end of this bulletin.

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APPLIED MEASUREMENT  
PROFESSIONALS, INC.

## ANSWER SHEET

### Directions for Marking the Answer Sheet

- Use a No. 2 lead pencil. Do **NOT** use ink or ball point pen.
- Make dark marks that completely fill the circle.
- Make **NO** stray marks on the answer sheet.

**A NAME** (Please print clearly.)

Last Name

First Name

Middle Initial

**B FIRST 4  
LETTERS  
OF LAST  
NAME**

**C APPLICANT  
ID NUMBER**

**D BIRTHDAY**

MONTH

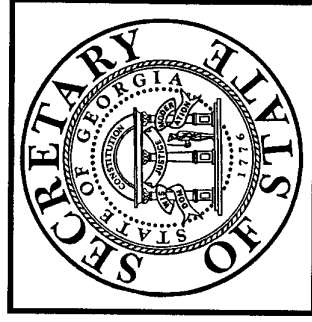
DAY

**E HAVE YOU EVER  
TAKEN THIS  
EXAM BEFORE?**

Yes No

**F TEST FORM  
NUMBER**

**G TEST  
CENTER  
NUMBER**



TEST BOOKLET  
NUMBER

1	(A)	(B)	(C)	(D)	41	(A)	(B)	(C)	(D)	81	(A)	(B)	(C)	(D)	121	(A)	(B)	(C)	(D)	161	(A)	(B)	(C)	(D)
2	(A)	(B)	(C)	(D)	42	(A)	(B)	(C)	(D)	82	(A)	(B)	(C)	(D)	122	(A)	(B)	(C)	(D)	162	(A)	(B)	(C)	(D)
3	(A)	(B)	(C)	(D)	43	(A)	(B)	(C)	(D)	83	(A)	(B)	(C)	(D)	123	(A)	(B)	(C)	(D)	163	(A)	(B)	(C)	(D)
4	(A)	(B)	(C)	(D)	44	(A)	(B)	(C)	(D)	84	(A)	(B)	(C)	(D)	124	(A)	(B)	(C)	(D)	164	(A)	(B)	(C)	(D)
5	(A)	(B)	(C)	(D)	45	(A)	(B)	(C)	(D)	85	(A)	(B)	(C)	(D)	125	(A)	(B)	(C)	(D)	165	(A)	(B)	(C)	(D)
6	(A)	(B)	(C)	(D)	46	(A)	(B)	(C)	(D)	86	(A)	(B)	(C)	(D)	126	(A)	(B)	(C)	(D)	166	(A)	(B)	(C)	(D)
7	(A)	(B)	(C)	(D)	47	(A)	(B)	(C)	(D)	87	(A)	(B)	(C)	(D)	127	(A)	(B)	(C)	(D)	167	(A)	(B)	(C)	(D)
8	(A)	(B)	(C)	(D)	48	(A)	(B)	(C)	(D)	88	(A)	(B)	(C)	(D)	128	(A)	(B)	(C)	(D)	168	(A)	(B)	(C)	(D)
9	(A)	(B)	(C)	(D)	49	(A)	(B)	(C)	(D)	89	(A)	(B)	(C)	(D)	129	(A)	(B)	(C)	(D)	169	(A)	(B)	(C)	(D)
10	(A)	(B)	(C)	(D)	50	(A)	(B)	(C)	(D)	90	(A)	(B)	(C)	(D)	130	(A)	(B)	(C)	(D)	170	(A)	(B)	(C)	(D)
11	(A)	(B)	(C)	(D)	51	(A)	(B)	(C)	(D)	91	(A)	(B)	(C)	(D)	131	(A)	(B)	(C)	(D)	171	(A)	(B)	(C)	(D)
12	(A)	(B)	(C)	(D)	52	(A)	(B)	(C)	(D)	92	(A)	(B)	(C)	(D)	132	(A)	(B)	(C)	(D)	172	(A)	(B)	(C)	(D)
13	(A)	(B)	(C)	(D)	53	(A)	(B)	(C)	(D)	93	(A)	(B)	(C)	(D)	133	(A)	(B)	(C)	(D)	173	(A)	(B)	(C)	(D)
14	(A)	(B)	(C)	(D)	54	(A)	(B)	(C)	(D)	94	(A)	(B)	(C)	(D)	134	(A)	(B)	(C)	(D)	174	(A)	(B)	(C)	(D)
15	(A)	(B)	(C)	(D)	55	(A)	(B)	(C)	(D)	95	(A)	(B)	(C)	(D)	135	(A)	(B)	(C)	(D)	175	(A)	(B)	(C)	(D)
16	(A)	(B)	(C)	(D)	56	(A)	(B)	(C)	(D)	96	(A)	(B)	(C)	(D)	136	(A)	(B)	(C)	(D)	176	(A)	(B)	(C)	(D)
17	(A)	(B)	(C)	(D)	57	(A)	(B)	(C)	(D)	97	(A)	(B)	(C)	(D)	137	(A)	(B)	(C)	(D)	177	(A)	(B)	(C)	(D)
18	(A)	(B)	(C)	(D)	58	(A)	(B)	(C)	(D)	98	(A)	(B)	(C)	(D)	138	(A)	(B)	(C)	(D)	178	(A)	(B)	(C)	(D)
19	(A)	(B)	(C)	(D)	59	(A)	(B)	(C)	(D)	99	(A)	(B)	(C)	(D)	139	(A)	(B)	(C)	(D)	179	(A)	(B)	(C)	(D)
20	(A)	(B)	(C)	(D)	60	(A)	(B)	(C)	(D)	100	(A)	(B)	(C)	(D)	140	(A)	(B)	(C)	(D)	180	(A)	(B)	(C)	(D)
21	(A)	(B)	(C)	(D)	61	(A)	(B)	(C)	(D)	101	(A)	(B)	(C)	(D)	141	(A)	(B)	(C)	(D)	181	(A)	(B)	(C)	(D)
22	(A)	(B)	(C)	(D)	62	(A)	(B)	(C)	(D)	102	(A)	(B)	(C)	(D)	142	(A)	(B)	(C)	(D)	182	(A)	(B)	(C)	(D)
23	(A)	(B)	(C)	(D)	63	(A)	(B)	(C)	(D)	103	(A)	(B)	(C)	(D)	143	(A)	(B)	(C)	(D)	183	(A)	(B)	(C)	(D)
24	(A)	(B)	(C)	(D)	64	(A)	(B)	(C)	(D)	104	(A)	(B)	(C)	(D)	144	(A)	(B)	(C)	(D)	184	(A)	(B)	(C)	(D)
25	(A)	(B)	(C)	(D)	65	(A)	(B)	(C)	(D)	105	(A)	(B)	(C)	(D)	145	(A)	(B)	(C)	(D)	185	(A)	(B)	(C)	(D)
26	(A)	(B)	(C)	(D)	66	(A)	(B)	(C)	(D)	106	(A)	(B)	(C)	(D)	146	(A)	(B)	(C)	(D)	186	(A)	(B)	(C)	(D)
27	(A)	(B)	(C)	(D)	67	(A)	(B)	(C)	(D)	107	(A)	(B)	(C)	(D)	147	(A)	(B)	(C)	(D)	187	(A)	(B)	(C)	(D)
28	(A)	(B)	(C)	(D)	68	(A)	(B)	(C)	(D)	108	(A)	(B)	(C)	(D)	148	(A)	(B)	(C)	(D)	188	(A)	(B)	(C)	(D)
29	(A)	(B)	(C)	(D)	69	(A)	(B)	(C)	(D)	109	(A)	(B)	(C)	(D)	149	(A)	(B)	(C)	(D)	189	(A)	(B)	(C)	(D)
30	(A)	(B)	(C)	(D)	70	(A)	(B)	(C)	(D)	110	(A)	(B)	(C)	(D)	150	(A)	(B)	(C)	(D)	190	(A)	(B)	(C)	(D)
31	(A)	(B)	(C)	(D)	71	(A)	(B)	(C)	(D)	111	(A)	(B)	(C)	(D)	151	(A)	(B)	(C)	(D)	191	(A)	(B)	(C)	(D)
32	(A)	(B)	(C)	(D)	72	(A)	(B)	(C)	(D)	112	(A)	(B)	(C)	(D)	152	(A)	(B)	(C)	(D)	192	(A)	(B)	(C)	(D)
33	(A)	(B)	(C)	(D)	73	(A)	(B)	(C)	(D)	113	(A)	(B)	(C)	(D)	153	(A)	(B)	(C)	(D)	193	(A)	(B)	(C)	(D)
34	(A)	(B)	(C)	(D)	74	(A)	(B)	(C)	(D)	114	(A)	(B)	(C)	(D)	154	(A)	(B)	(C)	(D)	194	(A)	(B)	(C)	(D)
35	(A)	(B)	(C)	(D)	75	(A)	(B)	(C)	(D)	115	(A)	(B)	(C)	(D)	155	(A)	(B)	(C)	(D)	195	(A)	(B)	(C)	(D)
36	(A)	(B)	(C)	(D)	76	(A)	(B)	(C)	(D)	116	(A)	(B)	(C)	(D)	156	(A)	(B)	(C)	(D)	196	(A)	(B)	(C)	(D)
37	(A)	(B)	(C)	(D)	77	(A)	(B)	(C)	(D)	117	(A)	(B)	(C)	(D)	157	(A)	(B)	(C)	(D)	197	(A)	(B)	(C)	(D)
38	(A)	(B)	(C)	(D)	78	(A)	(B)	(C)	(D)	118	(A)	(B)	(C)	(D)	158	(A)	(B)	(C)	(D)	198	(A)	(B)	(C)	(D)
39	(A)	(B)	(C)	(D)	79	(A)	(B)	(C)	(D)	119	(A)	(B)	(C)	(D)	159	(A)	(B)	(C)	(D)	199	(A)	(B)	(C)	(D)
40	(A)	(B)	(C)	(D)	80	(A)	(B)	(C)	(D)	120	(A)	(B)	(C)	(D)	160	(A)	(B)	(C)	(D)	200	(A)	(B)	(C)	(D)



1	43	85	127	152	177
2	44	86	128	153	178
3	45	87	129	154	179
4	46	88	130	155	180
5	47	89	131	156	181
6	48	90	132	157	182
7	49	91	133	158	183
8	50	92	134	159	184
9	51	93	135	160	185
10	52	94	136	161	186
11	53	95	137	162	187
12	54	96	138	163	188
13	55	97	139	164	189
14	56	98	140	165	190
15	57	99	141	166	191
16	58	100	142	167	192
17	59	101	143	168	193
18	60	102	144	169	194
19	61	103	145	170	195
20	62	104	146	171	196
21	63	105	147	172	197
22	64	106	148	173	198
23	65	107	149	174	199
24	66	108	150	175	200
25	67	109	151	176	

Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
A	B	C	D	E	F	G	H	I	J	K	L	M	N		

**TESTING CONDITIONS.** Questions on testing conditions are included in the test booklet. Please indicate your response to each of the questions (A through N) below by blackening Y for Yes, or N for No.